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No. IV.

LIGHT FOR STEAM BOATS.

*The SILVER MEDAL was presented to J. HIGGINS, Esq.
370, Oxford Street, for his Revolving Light for Steam-
Vessels; a Model of which has been placed in the Society's
Repository.*

370, Oxford Street,
27th Nov. 1827.

DEAR SIR,

As the Society has attached some importance to a revolving light for steam-vessels, and as those already invented have not been adopted by the public, I send you herewith a model of an easy and effectual arrangement of lights which, I think, will be found to be well calculated to answer the intended purpose. If the Society think the subject worthy of being referred to a committee, I will attend to give any explanation which may be thought necessary.

I am, Sir, &c. &c.

A. AIKIN, Esq.

Secretary, &c. &c.

JOHN HIGGINS.

The necessity of having a distinguishing light for steam-vessels is evident from the accidents that have occurred for want of such distinction; and the advantage of effecting this by rotatory or revolving lights, may be inferred from the medal which was last session voted to

Mr. Hawks for such an invention. The plan of that gentleman consisted in placing a light at each end of an arm, supported by the chimney, and receiving its motion from the axle of the paddle-wheels. Mr. Higgins's improvement consists in having two opposite fixed lights, one on each side of the chimney, and in placing a pulley at the same height in front of the chimney. From a point in the circumference of the pulley proceeds an arm, bearing the third light, and to this is given a rotatory motion round the axis of the pulley, by connecting this latter, by means of a band, with the axle of the paddle-wheels. The distinctive mark, therefore, of a steamer fitted up on this plan would be, one light revolving between two fixed ones. For further distinction, the moving light may be of a colour different from that of the two others. A farther advantage in this mode of arrangement would be, that as the lights are placed in front of the chimney, they would not be visible to a vessel except a-head or on the bow of the steamer; and, therefore, more or less in her course.

Reference to the Engraving of Mr. J. HIGGINS's Revolving Light for Steam-Boats. Plate IV.

Figs. 1 and 2, front and side elevations; and fig. 3, a bird's-eye view. *a a*, the upper and lower ends of the chimney, the middle part being broken away to bring them nearer together; *b*, the deck; *c c c c*, a band or rope to communicate motion from the machinery below deck to the wheel *d*: this wheel carries an arm *e*, on which the two sheaves *ff* move freely; to them are slung the lantern *g*, by two ropes *h h* and *i i*: they both

pass together through the eyes *j j*, then through the loop *k*, and under the pulley *l* of the weight *m*; they are then made fast to the cleat *n*. These ropes serve to raise and lower the lantern, and also, by the weight *m*, which hangs on them, to secure the upright position and prevent it from swinging while being carried round on the arm *e*: this arm revolves in the dotted circle *o o*. The weight *m* rises and falls half as much as the lantern. *p p*, an iron hoop round the chimney, from which projects an axis for the wheel *d* to turn on; and also the two arms *q q*, to which are slung the two stationary lanterns *r r*. Fig. 4 shews the back of one of these lanterns; they are furnished with four eyes *s s s s*. Two ropes *t t* are made fast to the bottom eyes; they pass through the upper eyes over the pulleys *u u*, placed in the arms, then return through the upper eyes and the lower eyes down to the cleats *v v*. These serve to raise or lower the lanterns, and also to prevent their being blown or shaken out of the vertical position. These two side lights are red, and the revolving one green; and this green one, as shewn in the plan, fig. 3, is so much in advance before the others, as only to appear to revolve between them when you are right a-head and in their way; but if the course of the vessel deviates to the right or left of you, the green light approaches the off red one and separates more from the near one, by which you may judge of its course; and if it deviates still more, it keeps eclipsing the off light; and when going right across your view, the chimney hides the off light, and the green revolving one appears only to rise and fall; and in all cases, the moving light is fore and the stationary one aft, as the reflectors placed at the back of the lanterns prevent their being seen in a stern view, when the vessel is of course going from you.